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[New Hampshire Code of Administrative Rules](#)
[Env-Ws 340-350](#)

PART Env-Ws 340 MCL VIOLATION - EVALUATION AND RESPONSE - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

PART Env-Ws 341 VARIANCES AND EXEMPTIONS

Env-Ws 341.01 Definitions.

- (a) "Exemption" means federal "exemption" as defined in 40 CFR 141.50
- (b) "Variance" means a federal "variance" as defined in 40 CFR 141.40
- (c) "Unreasonable risk to health" - Reserved
- (d) "Taking cost into consideration" - Reserved

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 341.02 Stringency of Variances and Exemptions. The division shall issue variances and exemptions from the requirements of these drinking water rules under conditions and in a manner which are not less stringent than the conditions under which and the manner in which variances and exemptions shall be granted by EPA.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 341.03 Consideration of a Variance or Exemption Request by the Division. The division shall act on any variance or exemption request submitted to it within 90 days of receipt of the request.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 341.04 Entry and Inspection of Public Water Systems.

(a) Any supplier of water or other person subject to a drinking water rules shall, at any time, allow the division staff, or a designated representative to enter any establishment, facility, or other property owned by or under the control of such supplier or other person to determine whether such supplier or other person has acted or is acting in compliance with the requirements of the division.

(b) Regular sanitary survey inspections shall include review, at a reasonable time, of records, files, paper, processes, controls and facilities, or test of any feature of a public water system, including its raw water source. The owner may request appropriate credentials.

Source. (See Revision Note at chapter heading for Env-Ws 300) #6521, eff 6-4-97

PART Env-Ws 342 VARIANCES ISSUED BY THE DIVISION

Env-Ws 342.01 through Env-Ws 342.09 - RESERVED

Source. (See Revision Note at chapter heading for Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.10 Requirements for a Variance.

(a) The division shall grant one or more variances to any public water system from any requirement respecting a maximum contaminant level of an applicable drinking water rule upon a finding that:

(1) Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the maximum contaminant levels of such drinking water rules despite application of the best technology, treatment techniques, or other means, which the division finds are generally available, taking costs into consideration; and

(2) The granting of a variance shall not result in an unreasonable risk to the health of persons served by the system as determined by the NH health risk assessment unit. Guidance from the health risk assessment unit of the division of public health shall be sought when making this determination.

(b) The division shall grant one or more variances to any public water system from any requirement of a specified treatment technique of an applicable drinking water rule upon a finding that the public water system applying for the variance has demonstrated that such treatment technique is not necessary to protect the health of persons because of the nature of the raw water source of such system.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.11 Variance Request.

(a) A supplier of water may request the granting of a variance for a public water system by submitting a request for a variance in writing to the division.

(b) Suppliers of water may submit a joint request for variances when they seek similar variances under similar circumstances.

(c) Any written request for a variance or variances shall include the following information:

(1) The nature and duration of variance requested;

(2) Relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of the drinking water rules;

(3) For any request made under Env-Ws 342.10:

a. Explanation in full and evidence of the best available treatment technology and techniques;

b. Economic and legal factors relevant to ability to comply;

c. Analytical results of raw water quality relevant to the variance request;

d. A proposed compliance schedule, including:

1. The date each step toward compliance will be achieved; and

2. As a minimum the following dates:

i. Date by which arrangement for alternative raw water source or improvement of existing raw water source shall be completed;

ii. Date of initiation of the connection of the alternative raw water source or improvement of existing raw water source; and

iii. Date by which final compliance shall be achieved.

e. A plan for the provision of safe drinking water in the case of an excessive rise in the contaminant level for which the variance is requested; and

f. A plan for additional interim control measures during the effective period of the variance.

(d) For any variance request made under Env-Ws 342.10, a statement shall be made that the system will perform monitoring and other reasonable requirements prescribed by the division as a condition to the variance.

(e) Other information shall be provided, if any, believed to be pertinent by the applicant.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.12 Consideration of a Variance Request.

(a) The division shall act on any variance request submitted pursuant to Env-Ws 342.11 within 90 days of receipt of the request.

(b) In its consideration of whether the public water system is unable to comply with a contaminant level required by these drinking water rules because of the nature of the raw water source, the division shall consider such factors as the following:

(1) The availability and effectiveness of treatment methods for the contaminant for which the variance is requested; and

(2) Cost and other economic considerations such as implementing treatment, improving the quality of the source water or using an alternate source.

(c) A variance shall only be issued to a system after the system's application of the best technology, treatment techniques, or other means which the division finds are available, taking costs into consideration.

(d) In its consideration of whether a public water system shall be granted a variance to a required treatment technique because such treatment is unnecessary to protect the public health, the division shall consider such factors as the following:

(1) Quality of the water source including water quality data and pertinent sources of pollution; and

(2) Source protection measures employed by the public water system.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.13 Disposition of a Variance Request.

(a) If the division decides to deny the application for a variance, it shall notify the applicant of its intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial, and shall offer the applicant an opportunity to present, within 30 days of receipt of the notice, additional

information or argument to the division. The division shall make a final determination on the request within 30 days after receiving any such additional information or argument. If no additional information or argument is submitted by the applicant, the application shall be denied.

(b) If the division proposes to grant a variance request submitted pursuant to Env-Ws 342.11, it shall notify the applicant of its decision in writing.

(c) Such notice shall identify:

(1) The variance;

(2) The facility covered;

(3) The period of time for which the variance will be effective;

(4) For the type of variance specified in Env-Ws 342.10, that the variance will be terminated when the system comes into compliance with the applicable rule, and may be terminated upon a finding by the division, after public hearing, that the system has failed to comply with any requirements of a final schedule issued pursuant to Env-Ws 342.14; and

(5) For the type of variance specified in Env-Ws 342.10, that the variance may be terminated, after a public hearing upon a finding that the nature of the raw water source is such that the specified treatment technique for which the variance was granted is necessary to protect the health of persons or upon a finding that the public water system has failed to comply with monitoring and other requirements prescribed by the division as a condition to the granting of the variance.

(d) For a variance specified in Env-Ws 342.10, the division shall propose a schedule for:

(1) Compliance, including increments of progress, by the public water system with each contaminant level requirement covered by the variance; and

(2) Implementation by the public water system of such additional control measures as the division shall require for each contaminant covered by the variance.

(e) The proposed schedule for compliance shall specify dates by which steps towards compliance are to be taken, including, at the minimum, where applicable:

(1) Date by which the arrangement for an alternative raw water source or improvement of existing raw water source shall be completed;

(2) Date of initiation of the connection for the alternative raw water source or improvement of the existing raw water source; and

(3) Date by which final compliance shall be achieved.

(f) The proposed schedule shall, if the public water system has no access to an alternative raw water source and can effect or anticipate no adequate improvement of the existing raw water source, specify an indefinite time period for compliance until a new and effective treatment technology is developed at which time a new compliance schedule shall be prescribed by the division.

(g) The proposed schedule for implementation of additional interim control measures during the period of variance shall specify interim treatment techniques, methods and equipment, and dates by which steps toward meeting the additional interim control measures are to be met.

(h) The schedule shall be prescribed by the division at the time of granting the variance, subsequent to provision of opportunity for hearing pursuant to Env-Ws 342.14.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.14 Public Hearings on Variances and Schedules.

(a) Before a variance and schedule proposed by the division pursuant to Env-Ws 342.13 may take effect, the division shall provide notice and opportunity for public hearing on the variance and schedule. A notice given pursuant to the preceding sentence shall cover as many variances as have been requested and a hearing held pursuant to such notice shall include each of the variances covered by the notice.

(b) Public notice of an opportunity for hearing on a variance and schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed variance and schedule, and shall include at least the following:

- (1) Posting of a public notice in the principal post office of each municipality or area served by the public water system, and publishing of a notice in a newspaper or newspapers of general circulation in the area served by the public water system;
- (2) A summary of the proposed variance and schedule; and
- (3) Shall inform interested persons that they may request a public hearing on the proposed variance and schedule.

(c) Requests for a hearing may be submitted by any interested person. Requests shall be submitted to the division within 30 days after the issuance of the public notices provided for in paragraph (b) of this section.

(d) Such requests shall include the following:

- (1) The name, address and telephone number of the individual, organization or other entity requesting a hearing;
- (2) A brief statement of the interest in the proposed variance and schedule of the person making the request, and of information that the requester intends to submit at such hearing; and
- (3) The signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(e) The division shall give notice in the manner set forth in (b) above of any hearing to be held pursuant to a request submitted by an interested person or on the division's own motion. Notice of the hearing shall also be sent to the persons requesting the hearing, if any. Notice of the hearing shall include a statement of the purpose of the hearing, information regarding the time and location of the hearing, and the address and telephone number of an office at which interested persons may obtain further information concerning the hearing. Notice of the hearing shall be given not less than 15 days prior to the time scheduled for the hearing.

(f) A hearing convened pursuant to (e) above shall be conducted before a hearing officer to be designated by the division. The hearing shall be conducted by the hearing officer in an informal, orderly and expeditious manner. The hearing officer shall have the authority to call witnesses, receive oral and

written testimony and take such other action as may be necessary to assure the fair and efficient conduct of the hearing.

(g) The variance and schedule shall become effective 30 days after the notice of opportunity for a hearing is given pursuant to (b) above if no timely request for a hearing is submitted and the division does not determine to hold a public hearing on its own motion.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.15 Action After Hearing. Within 30 days after the termination of the public hearing held pursuant to Env-Ws 342.14, the division shall, taking into consideration information obtained during such hearing and other relevant information, confirm, revise or rescind the proposed variance and schedule.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.16 Alternative Treatment Techniques. The division shall grant a variance from any treatment technique requirement of a drinking water rule to a supplier of water, upon a showing from any person that an alternative treatment technique not included in such requirement is at least as efficient in lowering the level of the contaminant with respect to which such requirement was prescribed. A variance under this paragraph shall be conditioned on the use of the alternative treatment technique which is the basis of the variance.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 342.17 Treatment Techniques.

(a) The division shall require community water systems and non-transient, non-community water systems to install and/or use any treatment method identified in Env-Ws 345 through Env-Ws 349 as a condition for granting a variance except as provided in (b) below. If, after the system's installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance.

(b) If a system can demonstrate, through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in Env-Ws 345 through Env-Ws 347 would only achieve a de minimis reduction in contaminants, the division shall issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(c) If the division determines that a treatment method identified in paragraph (b) of this section is technically feasible, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule issued. The division's determination shall be based upon studies by the system and other relevant information.

(d) The division shall require a public water system to use bottled water or point-of-use devices or other means as a condition for granting a variance from the requirements of Env-Ws 345 through Env-Ws 347 to avoid an unreasonable risk to health. Advice of the health risk assessment unit of the division of public health shall be sought in determining unreasonable risk to health.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

PART Env-Ws 343 EXEMPTIONS ISSUED BY THE DIVISION

PARTS Env-Ws 343.01 through Env-Ws 343.09 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.10 Requirements for an Exemption. The division shall exempt any public water system from any requirement respecting a maximum contaminant level or any treatment technique requirement, or from both, from an applicable drinking water rule upon a finding that:

- (a) Due to compelling factors, which may include economic factors, the public water system is unable to comply with such contaminant level or treatment technique requirement;
- (b) The public water system was in operation on the effective date of such contaminant level or treatment technique requirement; and
- (c) The granting of the exemption will not result in an unreasonable risk to health. Advice shall be sought from the health risk assessment unit of the division of public health services in the department of health and human services to determine unreasonable risk.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.11 Exemption Request.

- (a) A supplier of water may request the granting of an exemption pursuant to this sub-part for a public water system by submitting a request for exemption in writing to the division.
- (b) Suppliers of water may submit a joint request for exemptions when they seek similar exemptions under similar circumstances.
- (c) Any written request for an exemption or exemptions shall include the following information:
 - (1) The nature and duration of exemption requested;
 - (2) Relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of the drinking water rules;
 - (3) Explanation of the compelling factors such as time or economic factors which prevent such system from achieving compliance;
 - (4) Other information, if any, believed by the applicant to be pertinent to the application; and
 - (5) A proposed compliance schedule, including the date when each step toward compliance will be achieved.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.12 Consideration of an Exemption Request.

- (a) The division shall act on any exemption request within 90 days of receipt of the request.
- (b) In its consideration of whether the public water system is unable to comply due to compelling factors, the division shall consider such factors as the following:

- (1) Construction, installation, or modification of the treatment equipment or systems;
- (2) The time needed to put into operation a new treatment facility or to replace an existing system which is not in compliance; and
- (3) The economic feasibility of compliance.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.13 Disposition of an Exemption Request.

(a) If the division decides to deny the application for an exemption, it shall notify the applicant of its intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial, and shall offer the applicant an opportunity to present, within 30 days of receipt of the notice, additional information or argument to the division. The division shall make a final determination on the request within 30 days after receiving any such additional information or argument. If no additional information or argument is submitted by the applicant, the application shall be denied.

(b) If the division grants an exemption request submitted pursuant to Env-Ws 343.11, it shall notify the applicant of the decision in writing. Such notice shall identify the facility covered, and shall specify the termination date of the exemption. Such notice shall provide that the exemption will be terminated when the system comes into compliance with the applicable rule, and may be terminated, after public hearing, upon a finding by the division that the system has failed to comply with any requirements of a final schedule issued pursuant to Env-Ws 343.15.

(c) The division shall propose a schedule for:

- (1) Compliance, including increments of progress, by the public water system with each contaminant level requirement and treatment technique requirement covered by the exemption; and
- (2) Implementation by the public water system of such control measures as the division shall require for each contaminant covered by the exemption.

(d) The schedule shall be prescribed by the division at the time the exemption is granted, subsequent to the provision of an opportunity for a hearing pursuant to Env-Ws 343.14.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.14 Public Hearings on Exemption Schedules.

(a) Before a schedule proposed by the division pursuant to Env-Ws 343.13 shall take effect, the division shall provide notice and opportunity for a public hearing on the schedule. A notice given pursuant to the preceding sentence may cover the proposal of more than one such schedule and a hearing held pursuant to such notice shall include each of the schedules covered by the notice.

(b) Public notice of an opportunity for a hearing on an exemption schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed schedule,

(c) The notice shall:

- (1) Be posted in the principal post office of each municipality or area served by the public water system;
 - (2) Be published in a newspaper or newspapers of general circulation in the area served by the public water system; and
 - (3) Include a summary of the proposed schedule informing interested persons that they may request a public hearing on the proposed schedule.
- (d) Requests for a hearing may be submitted by any interested person. Requests shall be submitted to the division within 30 days after the issuance of the public notices provided for in paragraph (b) of this section.
- (e) Such requests shall include the following:
- (1) The name, address and telephone number of the individual, organization or other entity requesting a hearing;
 - (2) A brief statement of the interest in the proposed schedule of the person making the request and of information that the requesting person intends to submit at such hearing; and
 - (3) The signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.
- (f) The division shall give notice in the manner set forth in paragraph (b) of this section of any hearing to be held pursuant to a request submitted by an interested person or on the division's own motion. Notice of the hearing shall also be sent to the person requesting the hearing, if any. Notice of the hearing shall include a statement of the purpose of the hearing, information regarding the time and location of the hearing, and the address and telephone number of an office at which interested persons may obtain further information concerning the hearing. Notice of the hearing shall be given not less than 15 days prior to the time scheduled for the hearing.
- (g) A hearing convened pursuant to paragraph (d) of this section shall be conducted before a hearing officer to be designated by the division. The hearing shall be conducted by the hearing officer in an informal, orderly and expeditious manner. The hearing officer shall have authority to call witnesses, receive oral and written testimony and take such action as may be necessary to assure the fair and efficient conduct of the hearing.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.15 Final Schedule.

- (a) Within 30 days after the termination of the public hearing, the division shall, taking into consideration information obtained during such hearing, revise the proposed schedule as necessary and prescribe the final schedule for compliance and interim measures for the public water system granted an exemption under Env-Ws 343.12.
- (b) In the case of an exemption granted with respect to a contaminant level or treatment technique requirement prescribed by these drinking water rules, develop a final schedule within 12 months after the issuance of the exemption.
- (c) If the public water system has entered into an enforceable agreement to become a part of a regional public water system, as determined by the division, such schedule shall require compliance by

the public water system with each contaminant level and treatment technique requirement prescribed within 36 months after the issuance of the exemption.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.16 Extension of Date for Compliance.

(a) The final date for compliance provided in any schedule in the case of any exemption shall be extended by the division for a period not to exceed 3 years after the date of the issuance of the exemption if the public water system establishes that:

- (1) The system cannot meet the standard without capital improvements which cannot be completed within the period of such exemption;
- (2) In the case of a system which needs financial assistance for the necessary improvements, the system has entered into an agreement to obtain such financial assistance; or
- (3) The system has entered into an enforceable agreement to become a part of a regional public water system and the system is taking all practicable steps to meet the standard.

(b) In the case of a system which does not serve more than 500 service connections and which needs financial assistance for the necessary improvements, an exemption granted under paragraph (a)(1) or (2) shall be renewed for one or more additional 2-year periods if the system establishes that it is taking all practicable steps to meet the requirements of paragraph (a) of this section.

(c) If the division determines that a treatment method identified in section Env-Ws 345 through Env-Ws 347 is technically feasible, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule issued. The division's determination shall be based upon studies by the system and other relevant information.

(d) The division shall require a public water system to use bottled water or point-of-use devices or other means as a condition for granting a variance or an exemption from the requirements of Env-Ws 315 through Env-Ws 318 to avoid an unreasonable risk to health. Advice of the health risk assessment unit of the division of public health services of the department of health and human services shall be sought in determining unreasonable risk to health.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 343.17 Bottled Water and Point-of-Use Devices.

(a) The division shall require a public water system to use bottled water or point-of-use devices or other means of response as a condition for granting an exemption from the requirements of Parts Env-Ws 315 through Env-Ws 317.

(b) Public water systems that use bottled water as a condition of obtaining an exemption shall meet the requirements set out in Part Env-Ws 308.

(c) Public water systems that use point-of-use devices as a condition for receiving an exemption shall meet the requirements set out in Env-Ws 308.20.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

PART Env-Ws 344 MODIFYING WATER QUALITY

Env-Ws 344.01 Treatment of Contaminants by Flow Mix.

(a) Flow mix, as defined in Env-Ws 302, shall not be used as a treatment alternative except for the contaminants specified in Env-Ws 315.01 through Env-Ws 315.49.

(b) Before beginning the design of a flow mix treatment system, a water system representative shall inform the division that the water system intends to use the flow mix treatment method.

(c) The water supply sources proposed to be mixed shall be determined to be reliably and consistently stable for the contaminant to be treated in order to qualify for flow mix treatment. For the purposes of this section "reliably and consistently" means that the concentration of the target MCL has a less than 20% variation of the mean value of available data for that contaminant.

(d) The equipment used to verify and document proper flow mix treatment shall include:

- (1) One control circuitry for all sources proposed for flow mix;
- (2) Flow meters installed to measure the output from each source to be used; and
- (3) A device, such as a gate valve, on the piping from each source to allow that source's output to be regulated.

(e) The system shall submit monthly records documenting the actual ratio of flow between all sources.

(f) A water quality sample shall be taken and analyzed:

- (1) From each source, on an annually basis; and
- (2) Of the mixture on a quarterly basis.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

PART Env-Ws 345 BEST AVAILABLE TECHNOLOGY, TREATMENT TECHNIQUES OR OTHER MEANS GENERALLY AVAILABLE

Env-Ws 345.01 BAT for Microbiological.

(a) The following shall be the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant level for total coliforms specified in Env-Ws 315.01:

- (1) Protection of wells from contamination by coliforms by appropriate placement and construction as required in Env-Ws 371 and Env-Ws 372;
- (2) Maintenance of a disinfectant residual throughout the distribution system;
- (3) Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, and continual maintenance of positive water pressure in all parts of the distribution systems;
- (4) Filtration and/or disinfection of surface water, or disinfection of ground water using strong oxidants such as chlorine, chlorine dioxide, or ozone; and/or

(5) The development and implementation of an EPA-approved DES wellhead protection program.

(b) No variance or exemption from the maximum contaminant level for bacteria specified in Env-Ws 315.01 shall be permitted.

(c) No variances from the requirements of Env-Ws 380 concerning surface water filtration and disinfection shall be permitted. The granting of an exemption shall be specified in Env-Ws 380.26.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 345.02 through Env-Ws 345.30 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 345.31 BAT for Turbidity. No variances from the requirements of Env-Ws 380 concerning surface water filtration and disinfection shall be permitted. The granting of an exemption shall be as specified in Env-Ws 380.26.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 345.32 through Env-Ws 345.49 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 345.50 Variances and Exemptions from the Maximum Contaminant Levels for Radionuclides.

(a) The department shall process variances and exemptions, as specified in Env-Ws 341 through 343.

(b) The department shall require a community water system to install, and use any treatment method or methods identified in Env-Ws 345.51, Env-Ws 345.60, or Env-Ws 345.61 as a condition for granting a variance except as provided in paragraph (b) of this section. If, after the installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance.

(c) If a system demonstrates through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in Env-Ws 345.51, Env-Ws 345.60, or Env-Ws 345.61 would only achieve a de minimis reduction in contaminants, the department shall issue a schedule of compliance that requires the system, being granted the variance, to examine other treatment methods as a condition of obtaining the variance.

(d) If the department determines that a treatment method or methods identified Env-Ws 345.51, Env-Ws 345.60, or Env-Ws 345.61 is technically feasible, the department shall require the system to install, and use that treatment method in connection with a compliance schedule issued, or both. The department's determination shall be based upon studies by the system and other relevant information.

(e) The department shall require a public water system to use bottled water or other means as a condition for granting a variance from the requirements of Env-Ws 315.51 or Env-Ws 315.60 to avoid an unreasonable risk to health.

(f) A public water system that uses bottled water as a condition for receiving a variance from the requirements of Env-Ws 315.51 or 315.60 shall meet the requirements of Env-Ws 308 concerning bottled water.

(g) The department shall not grant the owner a public water system an exemption from the MCLs for the following radionuclides:

- (1) Compliance gross alpha;
- (2) Radium 226;
- (3) Radium 228;
- (4) Total beta emitters; and
- (5) Total photon emitters.

(h) A system owner may request an exemption from the uranium MCL if:

- (1) Due to compelling factors, the public water system is unable to comply with the MCL or implement measures to develop an alternative source of water supply;
- (2) The public water system was in operation on or before December 8, 2003, or if the system was not operating by this date, no reasonable alternative source of drinking water is available;
- (3) The exemption does not result in an unreasonable risk to public health; and
- (4) The management and restructuring changes cannot reasonably be made to lead to MCL compliance or improve the quality of water.

(i) A public water system unable to comply with the uranium MCL of 30 ug/L after December 8, 2003, in accordance with 40 CFR 142, may submit a written request to the department for an exemption as specified in Env-Ws 343.11.

(j) The department shall notify the system owner in writing of its determination to grant or deny the request.

(k) If a water system serving 3,301 persons or greater receives an exemption from the department, the department shall issue a schedule requiring compliance as expeditiously as possible but no later than December 8, 2006.

(l) If a water system serving 3,300 persons or fewer receives an exemption from the department, the department shall issue a schedule requiring compliance as expeditiously as possible but no later than December 8, 2009.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; ss by #8040, eff 2-14-04

Env-Ws 345.51 BAT for Alpha Radionuclides.

(a) Best available treatment for alpha emitters shall be that specified in Table 345-1.

Table 345-1

Best Available Treatment for Alpha Emitters

<u>Radionuclides Name</u>	<u>BAT (See Table 345-2)</u>
Gross Alpha	2
Uranium	1,2,3,4
Radium 226	1,2,3

(b) The codes for Table 345-1 shall be as follows in Table 345-2;

Table 345-2

Codes For Table 345-1

Code	Treatment Type
1	Ion exchange;
2	Reverse osmosis;
3	Lime softening,
4	Coagulation/filtration

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; ss by #8040, eff 2-14-04

Env-Ws 345.52 through Env-Ws 345.59 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 345.60 BAT for Beta Radionuclides.

(a) Best available treatment for beta emitters shall be that specified in Table 345-3.

Table 345-3

Best Available Treatment for Beta Emitters

<u>Radionuclide Name</u>	<u>BAT See Table 345-2</u>
Gross beta and photon Emitters	1,2
Radium 228	1,2,3

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; ss by #8040, eff 2-14-04

Env-Ws 345.61 Small System Compliance Technologies for Radionuclides.

(a) Best available treatment for beta emitters shall be as specified in 40 CFR 141.66 (h) Table C.

(b) Compliance technologies by system size category for radionuclides shall be as specified in 40 CFR 141.66 (h) Table D.

Source. #8040, eff 2-14-04

PART Env-Ws 346 BEST AVAILABLE TREATMENT (BAT) FOR INORGANIC CHEMICALS

Env-Ws 346.01 BAT Inorganics.

(a) The following shall be the best technology, treatment technique, or other means available for achieving compliance with the MCL specified in Env-Ws 316.01(c), as identified in Table 346-1 below:

Table 346-1
Best Available Treatment for Inorganics

<u>Chemical Name</u>	<u>BAT (See codes in Table 346-3)</u>
Arsenic	1,2,5,6,7,9
Asbestos	2,3,8
Barium	5,6,7,9
Cadmium	2,5,6,7
Chromium	2,5,6*,7
Fluoride	1***, 7***
Lead	See Env-Ws 381
Mercury	2**,4,6**,7**
Nitrate	5,7,9
Nitrite	5,7
Selenium	1,2***,6,7,9

(b) The following in Table 346-2 shall be the best technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level for inorganic chemicals in Env-Ws 316.01(e).

Table 346-2
Best Available Treatment for Other Inorganics

<u>Chemical Name</u>	<u>BAT (See codes in Table 346-3)</u>
Antimony	2,7
Beryllium	1,2,5,6,7
Cyanide	5,7,9,13
Nickel	5,6,7
Thallium	1,5

(c) The codes for Table 346-2 shall be as follows in Table 346-3.

Table 346-3
Codes for Table 346-1 and 346-2

<u>Code</u>	<u>Treatment Method</u>
*	BAT for chromium III only
**	BAT only if influent Mercury concentrations less than 10ug/l
***	BAT for selenium IV only
****	Central treatment only
1	Activated Alumina
2	Coagulation/Filtration (Not BAT for systems less than 500 service connections)
3	Direct and Diatomite Filtration
4	Granular Activated Carbon
5	Ion Exchange
6	Lime softening, not BAT for systems less than 500 service connections
7	Reverse Osmosis
8	Corrosion Control
9	Electrodialysis
10	Reserved
11	Reserved
12	Reserved
13	Chlorine Oxidation
14	Ultraviolet

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; amd by #7645, eff 2-8-02

Env-Ws 346.02 Variances and Exemptions from the Maximum Contaminant Levels for Inorganic Chemicals.

(a) The division shall require community water systems and non-transient, non-community water systems to install and/or use any treatment method identified in Env-Ws 346.01 as a condition for granting a variance except as provided in paragraph (b) of this section. If, after the system's installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance.

(b) If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in Env-Ws 346.01 would only achieve a de minimis reduction in contaminants, the division shall issue a schedule of compliance that requires the system being granted the variance, to examine other treatment methods as a condition of obtaining the variance.

(c) If the division determines that a treatment method identified in paragraph (b) of this section is technically feasible, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule issued. The division's determination shall be based upon studies by the system and other relevant information.

(d) The division shall require a public water system to use bottled water or point-of-use devices or other means as a condition for granting a variance or an exemption from the requirements of Env-Ws 316.01, to avoid an unreasonable risk to health.

(e) Public water systems that use bottled water as a condition for receiving a variance or an exemption from the requirements of Env-Ws 316.01 shall meet the requirements of Env-Ws. 308.30 concerning bottled water.

(f) Systems that are approved to use a point-of-use or point-of-entry device to obtain a variance and/or exemption shall meet the condition(s) for such devices in Env-Ws 308.10 and Env-Ws 308.20.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 346.03 Variances from the Maximum Contaminant Level for Fluoride.

(a) The division identifies the following as required best technology, treatment techniques or other means generally available for achieving compliance with the maximum contaminant level for fluoride specified in Env-Ws 316.01 and Env-Ws 319.01:

- (1) Activated alumina absorption, centrally applied; and
- (2) Reverse osmosis, centrally applied.

(b) The division shall require a community and non-transient, non-community water system to install and/or use any treatment method identified in (a) above as a condition for granting a variance unless the division determines that such a treatment method identified in (a) above as a condition for granting a variance is not available and effective for fluoride control for the system.

(c) A treatment method shall not be considered to be "available and effective" for an individual system if the treatment method would not be technically appropriate and technically feasible for that system. If, upon application by a system for a variance, the division determines that none of the treatment methods identified in (a) above are available and effective for the system, that system shall be granted a variance as to the availability and effectiveness of such treatment methods which shall be based upon studies by the system and other relevant information.

(d) If a system submits information to demonstrate that a treatment method is not available and effective for fluoride control for that system, the division shall make a finding whether this information supports a decision that such treatment method is not available and effective for that system before requiring installation and/or use of such treatment method.

(e) Pursuant to Env-Ws 342.13, the division shall issue a schedule of compliance that shall require the system being granted the variance to examine the following treatment methods to determine the probability that any of these methods will significantly reduce the level of fluoride for that system:

- (1) Modification of lime softening;
- (2) Alum coagulation;
- (3) Electrodialysis;
- (4) Anion exchange resins;
- (5) Well field management;
- (6) Alternate source; and
- (7) Regionalization.

(f) If such a probability exists, the system shall determine whether any of these methods are technically feasible and economically reasonable, and that the fluoride reductions obtained will be commensurate with the costs incurred with the installation and use of such treatment methods for that system.

(g) If the division determines that a treatment method is available, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule. The division determination shall be based upon studies by the system and other relevant information.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 346.04 Variances and Exemptions Concerning Corrosion Control. Criteria concerning variances and exemptions concerning corrosion control shall be as stated in Env-Ws 381.34.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 346.05 BAT Maximum Residual Disinfectant Levels. The control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels shall be the best available technology, treatment technique, or means available for achieving compliance with the maximum residual disinfectant levels specified in Table 317-10.

Source. #7735, eff 8-2-02

PART Env-Ws 347 BEST AVAILABLE TREATMENT - ORGANICS

Env-Ws 347.01 BAT For Volatile Organic Chemicals.

(a) The required technologies listed in Table 347-1 below shall be the best technology, treatment techniques, or other means available for achieving compliance with the MCL level for Volatile Organic Chemicals (VOC) specified in Env-Ws 317.01(a).

Table 347-1
Best Available Treatment for Volatile Organics

<u>VOC Organic Chemicals</u>	<u>Granular Activated Carbon</u>	<u>Packed Tower Aeration</u>	<u>Oxidation Chlorination or Ozonation</u>
Benzene	AC	PT	
Carbon tetrachloride	AC	PT	
1,2 Dichloroethane	AC	PT	
Trichloroethylene	AC	PT	
Para-dichlorobenzene	AC	PT	
1,1 Dichloroethylene	AC	PT	
1,1,1 Trichloroethane	AC	PT	
Vinyl chloride	AC		

(b) The required technologies listed in Table 347-2 below shall be the best technology, treatment techniques, or other means available for achieving compliance with the MCL level organics as specified in Env-Ws 317.01(b).

Table 347-2
Best Available Treatment for Other Volatile Organics

<u>Treatment</u>			
VOC Organic Chemicals	Granular Activated <u>Carbon</u>	Packed Tower <u>Aeration</u>	Oxidation Chlorination or <u>Ozonation</u>
cis-1,2 Dichloroethylene	AC	PT	
1,2 Dichloropropane	AC	PT	
Ethylbenzene	AC	PT	
Methyl tertiary-butyl ether (MtBE)	AC	PT	
Monochlorobenzene	AC	PT	
o-Dichlorobenzene	AC	PT	
Styrene	AC	PT	
Tetrachloroethylene	AC	PT	
Toluene	AC	PT	
trans-1,2 Dichloroethylene	AC	PT	
Xylene (Total)	AC	PT	

(c) The required technologies listed in Table 347-3 shall be the best technology, treatment techniques, or other means available for achieving compliance with the MCL level for VOCs specified in Env-Ws 317.01(c).

Table 347-3
Best Available Treatment for Additional Volatile Organics

<u>Treatment</u>			
VOC Organic Chemicals	Granular Activated <u>Carbon</u>	Packed Tower <u>Aeration</u>	Oxidation Chlorination or <u>Ozonation</u>
Dichloromethane		PT	
1,2,4 Trichlorobenzene	AC	PT	
1,1,2 Trichloroethane	AC	PT	

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; amd by #7261, eff 5-4-00

Env-Ws 347.02 Variances and Exemptions from the Maximum Contaminant Levels for Organic Chemicals.

(a) The required technologies listed in section Env-Ws 347.01 shall be the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for organic chemicals specified in Env-Ws 317.01 and Env-Ws 347.40.

(b) The division shall require community water systems and non-transient, non-community water systems to install and/or use any treatment method identified in Env-Ws 347.01 as a condition for granting a variance except as provided in paragraph (c) of this section. If, after the system's installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance.

(c) If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in Env-Ws 347.01 would only achieve a de minimis reduction in contaminants, the division shall issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(d) If the division determines that a treatment method identified in paragraph (c) of this section is technically feasible, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule issued. The division's determination shall be based upon studies by the system and other relevant information.

(e) The division shall require a public water system to use bottled water or point-of-use devices or other means as a condition for granting a variance or an exemption from the requirements of Env-Ws 317.01 to avoid an unreasonable risk to health.

(f) Public water systems that use bottled water as a condition for receiving a variance or an exemption from the requirements of Env-Ws 317.01 shall meet the requirements of Env-Ws 303.30 concerning bottled water.

(g) Public water systems that use point-of-use devices as a condition for obtaining a variance or an exemption from Env-Ws 317.01 for organic chemicals shall meet the conditions of Env-Ws 303.20.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.03 through Env-Ws 347.39 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.40 BAT Organics-Synthetic Organics.

(a) The required technology listed in Table 347-4 below shall be the best technology, treatment techniques, or other means available for achieving compliance with the MCL level for synthetic organics as specified Env-Ws 317.40(a).

Table 347-4
Best Available Treatment for Synthetic Organics

<u>Synthetic Organic Chemicals</u>	Granular Activated <u>Carbon</u>	<u>Treatment</u>	
		<u>Packed Tower Aeration</u>	<u>Oxidation Chlorine or Ozonation</u>
Alachlor	AC		
Aldicarb	AC		
Aldicarb sulfoxide	AC		
Aldicarb sulfone	AC		
Atrazine	AC		
Carbofuran	AC		
Chlordane	AC		
Dibromochloropropane (DBCP)	AC	PT	
Ethylene Dibromide (DB)	AC	PT	
Heptachlor	AC		
Heptachlor epoxide	AC		

Lindane	AC
Methoxchlor	AC
Polychlorinated Biphenyls (PCB)	AC
Pentachlorophenol	AC
Toxaphene	AC
2,4,5-TP (silvex)	AC
2,4-D	AC

(b) The division identifies the required technology listed in Table 347-5 below as the best technology, treatment techniques, or other means available for achieving compliance with the MCL level for synthetic organics as specified in Env-Ws 317.40(b).

Table 347-5
Best Available Treatment for Other Synthetic Organics

<u>Synthetic Organic Chemicals</u>	<u>Treatment</u>		
	<u>Granular Activated Carbon</u>	<u>Packed Tower Aeration</u>	<u>Oxidation Chlorine or Ozonation</u>
Benzo(a)pyrene	AC		
Dalapon	AC		
Di(ethylhexyl)adipate	AC	PT	
Di(ethylhexyl)phthalate	AC		
Butybenzylphthalate	AC		
Dinoseb	AC		
Diquat	AC		
Endothall	AC		
Endin	AC		
Glyphosate			O
Hexachlorobenzene	AC		
Hexachlorocyclopentadiene	AC	PT	
Oxaml (Vydate)	AC		
PAH's			
Benzo(a)pyrene	AC		
Picloram	AC		
Simazine	AC		
2,3,7,8 TCDD Dioxin	AC		

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.41 Variances and Exemptions from the Maximum Contaminant Levels for Synthetic Organic Chemicals.

(a) The required technologies listed in paragraphs Env-Ws 347.40 shall be the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for organic chemicals specified in Env-Ws 317.40.

(b) The division shall require community water systems and non-transient, non-community water systems to install and/or use any treatment method identified in Env-Ws 347.40 as a condition for granting a variance except as provided in paragraph (c) of this section. If, after the system's installation of the treatment method, the system cannot meet the MCL, the system shall be eligible for a variance.

(c) If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in Env-Ws 347.40 would only achieve a de minimis reduction in contaminants, the division shall issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(d) If the division determines that a treatment method identified in paragraph (c) of this section is technically feasible, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule issued. The division's determination shall be based upon studies by the system and other relevant information.

(e) The division shall require a public water system to use bottled water or point-of-use devices or other means as a condition for granting a variance from the requirements of Env-Ws 317.40 to avoid an unreasonable risk to health.

(f) Public water systems that use bottled water as a condition for receiving a variance from the requirements of Env-Ws 317.40 shall meet the requirements of Env-Ws 303.30 concerning bottled water.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.42 through Env-Ws 347.69 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.70 BAT Disinfection Byproducts. The technology listed in Table 347-6 below shall be the best technology, treatment technique, or other means available for achieving compliance with the MCL level for disinfection byproducts as specified in Env-Ws 317.70 and in Table 347-6 below:

Table 347-6
BAT For Disinfection Byproducts

<u>Disinfection Byproduct</u>	<u>Best available technology</u>
TTHM	Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant
HAA5	Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant.
Bromate	Control of ozone treatment process to reduce production of bromate.
Chlorite	Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; ss by #7735, eff 8-2-02

Env-Ws 347.71 Variances from the MCL Disinfection Byproducts.

(a) The following shall be the required best technology, treatment techniques or other means generally available for achieving compliance with the maximum contaminant level for total trihalomethanes:

- (1) Use of chloramines as an alternate or supplemental disinfectant or oxidant;
- (2) Use of chlorine dioxide as an alternate or supplemental disinfectant or oxidant;
- (3) Improved existing clarification for THM precursor reduction;
- (4) Moving the point of chlorination to reduce TTHM formation and, where necessary, substituting for the use of chlorine as a pre-oxidant chloramines, chlorine dioxide or potassium permanganate; and
- (5) Use of powdered activated carbon for THM precursor or TTHM reduction seasonally or intermittently at dosages not to exceed 10 mg/L on an annual average basis.

(b) The division shall require a community water system to install and/or use any treatment method identified in (a) above as a condition for granting a variance unless the division determines that such treatment method identified in (a) above is not available and effective for TTHM control for the system.

(c) A treatment method shall not be considered to be "available and effective" for an individual system if the treatment method would not be technically appropriate and technically feasible for that system or would only result in a marginal reduction in TTHM for the system. If, upon application by a system for a variance, the division determines that none of the treatment methods identified in (a) above are available and effective for the system, that system shall be entitled to a variance. The division's determination as to the availability and effectiveness of such treatment methods shall be based upon studies by the system and other relevant information.

(d) If a system submits information intending to demonstrate that a treatment method is not available and effective for TTHM control for that system, the division shall make a finding whether this information supports a decision that such treatment method is not available and effective for that system before requiring installation and/or use of such treatment method.

(e) Pursuant to Env-Ws 342.13, the division shall issue a schedule of compliance that shall require the system being granted the variance to examine the following treatment methods to determine the probability that any of these methods will significantly reduce the level of TTHM for that system:

- (1) Introduction of off-line water storage for THM precursor reduction;
- (2) Aeration for TTHM reduction, where geographically and environmentally appropriate;
- (3) Introduction of clarification where not currently practiced;
- (4) Consideration of alternative sources of raw water; and
- (5) Use of ozone as an alternate or supplemental disinfectant or oxidant.

(f) If such probability exists, the system shall determine whether any of these methods are technically feasible and economically reasonable, and that the TTHM reductions obtained shall be commensurate with the costs incurred with the installation and use of such treatment methods for that system.

(g) If the division determines that a treatment method is available, the division shall require the system to install and/or use that treatment method in connection with a compliance schedule. Determination shall be based upon studies by the system and other relevant information. In no event shall the division require a system to install and/or use a treatment method not described in (a) or (c) above to obtain or maintain a variance from the TTHM rule or in connection with any variance compliance schedule.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97; amd and renumbered by #7735, eff 8-2-02 (formerly Env-Ws 347.70)

Env-Ws 347.72 through Env-Ws 347.89 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

Env-Ws 347.90 Special Treatment Acrylamide and Epichlorohydrin.

(a) The requirements below shall constitute primary drinking water rules. These rules shall establish treatment techniques in lieu of maximum contaminant levels for these specified contaminants.

(b) Each public water system shall certify annually in writing to the division that when acrylamide and epichlorohydrin are used in drinking water systems the combination of dose and monomer level does not exceed the levels specified as follows:

- (1) Acrylamide shall not exceed 0.05% dosed at 1 ppm; and
- (2) Epichlorohydrin shall not exceed 0.01% dosed at 20 ppm.

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97

PARTS Env-Ws 348 through Env-Ws 350 - RESERVED

Source. (See Revision Note at chapter heading Env-Ws 300) #6521, eff 6-4-97